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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,119	10/30/2000	Gunter Halmeschlager	P19790	3782
7055	7590	03/29/2011		
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			EXAMINER FORTUNA, JOSE A	
			ART UNIT 1741	PAPER NUMBER
			NOTIFICATION DATE 03/29/2011	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Office Action Summary****Application No.**

09/646,119

**Applicant(s)**

HALMSCHLAGER ET AL.

**Examiner**

José A. Fortuna

**Art Unit**

1741

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 February 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 98-131 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 98-131 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF-05)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application.
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## DETAILED ACTION

### Claim Objections

1. Claim 108 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 108 seems to contradict the independent claim, because the claim recites that the first layer to be couched with their sides of higher fines content is formed by a Fourdrinier former; however, the independent claim, claim 98, clearly recites that those layers, i.e., the ones which are to be joined by the sides of higher fines content, are formed by Gap formers, see below (emphasis added), and thus claim 98 does not further limit the independent claim.

“...at least two layers to be couched with each other and each having a higher content of fines on one side being fed to the relevant couching zone in such a way that they come into contact with each other with their sides having a higher content of fines, **at least two of these layers being produced by a gap former in each case...**”

### Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 98-131 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 98 is vague and indefinite since the relative position of the components of the machine has not been recited. Note that this affects some of the dependent as well, e.g.,

claim 100, which claim the first of the two gap formers, since one cannot identify which is the first or the second former.

In claims 98 and 117, a broad range or limitation followed by linking terms (e.g., preferably, **particularly**, maybe, for instance, especially, etc.) and a narrow range or limitation within the broad range or limitation is considered indefinite since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired.

In claim 100 the phrase “the first of the two gap formers” lacks of antecedent basis, since the independent claim recites “at least two.” The claim is vague and indefinite, because it is unclear which one is the first gap former and which one is the second, since the relative position of the parts of the device has not been recited.

In claims 100, 103, 111, 119 a broad range or limitation followed by linking terms (e.g., **preferably**, particularly, maybe, for instance, especially, etc.) and a narrow range or limitation within the broad range or limitation is considered indefinite since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired.

In claims 104 and 106 the phrase “the first gap former” lacks of sufficient antecedent basis. Note that the independent claim uses the phrase “at least two.”

In claim 105 the phrase “the relevant layer” lacks of antecedent basis.

In claim 107 the phrase “the second gap former” lacks of antecedent basis.

In claims 109 and 110 the phrase “the gap former” renders the claim indefinite, because it is unclear to which gap former is referenced, since there are at least two gap formers.

Claim 112 is vague and indefinite because the phrase “at least three layer(s)” covers four layers and therefore the recitation of the four layers renders the claim unclear. Also in claim 112 the phrase “the preceding gap former” lacks of antecedent basis. In claims 122-124 the phrase “the first gap former” lacks of antecedent basis. In claims 103, 109, 111, 119 and 127 the meaning in the context of the word “generally” to identify a direction is vague and therefore, the metes and bounds of patent protection cannot be ascertained.

#### **Claim Rejections - 35 USC § 103**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

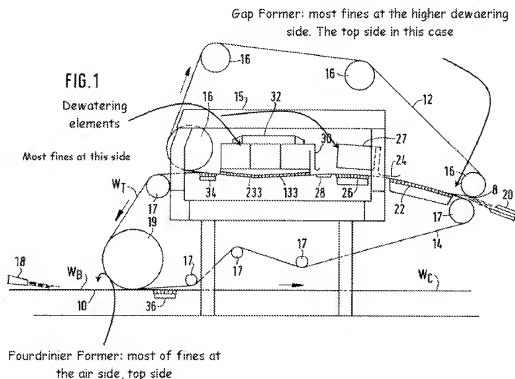
7. Claims 98-131 are rejected under 35 U.S.C. §103(a) as being unpatentable over Turner et al., US Patent No. 4,830,709 further evidenced by US patent Nos., 3,378,435, 5,607,551, 5,238,534 or GB 2 283 766 and Smook in the "Handbook for Pulp & Paper Technologist," or Koponen et al., US Patent No. 4,614,566.

Turner et al teach a device for making a multi-ply paper in which the different plies are made in separated headboxes, couched, and joined see figures. Turner et al. teach the making of cardboard and teach the advantage of joining the plies using the surface having more fines on the surface, see column 2, lines 12-18. Also Turner et al. teach the use of a Multilayer headbox along with other types of headboxes in the multi-ply board, see figures 2-3, column 5, lines 35-45 and column 6, lines 39-52 and teach in the same paragraph the formation of thin layer, i.e., a paper layer, and other layer being a board, paperboard. Turner et al show in the figures the use of pressure elements in the outside of the felts/fabrics, see elements 22, 22a etc. Since the device of Turner et al. shows all the elements of the claimed device and since the dewatering start at the bottom and then at the top, then most of the fines would be top<sup>1</sup>, see figure below, and it is well known that Fourdrinier formers have greater concentration of fines at the air side, see for example page 1, lines 11-16 of the present application, then Turner et al. are joining the plies with

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<sup>1</sup> This is well known and taught by applicants on page 1, lines 16 of the original specification, "In so-called gap formers the dewatering occurs first at the top and then at the bottom, which results in higher content of fines at the bottom," same applies to Turner et al. the dewatering first occurs at the bottom and then at the top, which concentrate the fines at the top.

higher fines content and therefore, the limitations of the claims are met, or at least the minor modification(s) to obtain the claimed invention would have been obvious to one of ordinary skill in the art. Moreover, Turner et al. clearly teach that better bonding is obtained if the



plies with higher fines content are joined; see column 1, lines 37-46 and therefore, the joining of the plies with higher content of fines would have been obvious to one of ordinary skill in the art. Note also that the twin wire taught by Turner et al. are gap formers, The later is evidenced by Smook in the "Handbook for Pulp & Paper Technologist," second edition, which teaches that a gap former is a twin wire machine having blade in the surfaces of the wires, (Blade Former), or roll(s) for the dewatering of the web, (Roll Former) and Turner et al shows a twin wire with blades at the surface of

the wires, then Turner twin wire is a Gap Former. Since Turner et al. show in the figures a Fourdrinier ply coughed together with a twin wire/gap formed ply, the system shown by the reference seems to have all the structural limitations as claimed. Koponen et al., further evidences that in Fourdrinier machines the air side, i.e. the top side, contains higher concentration of fines than the bottom side, see specifically, column 3, lines 26-36. Turner et al are silent with respect to the circulating of a dewatering belt over a former element, including a headbox, two gap formers in which the respective twin wire zone run downward (of the independent claims); Those limitations define what is well known in the art, as a "Crescent Former," defined in US patent No., 3,378,435 a more recently used in US Patent Nos. 5,607,551, 5,238,534, GB 2 283 766, DE 19704443 A1, etc. Note that the crescent former is a gap former, twin wire, see Smook, cited previously, having a forming element, a roll, in which a moving felt and a fabric wrap the roll, the felt run next to the roll and the fabric runs on the outside forcing the stock to drain through the fabric. Crescent formers are functionally equivalent to twin wires/gap formers and its use would have been obvious to one of ordinary skill in the art since he/she would have reasonable expectation of success if a crescent former is used instead of a functional equivalent twin wire. Note also that it has been held that "[W]here two equivalents are interchangeable for their desired function, substitution would have been obvious and thus, express suggestion of desirability of the substitution of one for the other is unnecessary." In re Fout 675 F. 2d 297, 213 USPQ 532 (CCPA 1982); In re Siebentritt, 372 F.2d 566, 152 USPQ 618 (CCPA 1967).



Note that Turner et al teach the use of two gap formers and shows in all the figures the formed web traveling in opposite directions before entering the couching zone. Turner et al. teach the use of several headboxes, including Fourdrinier formers and the different ways in which the layers having more fines can be joined. Turner et al teach the combination of gap formers and a Fourdrinier, see figures and also teach that more than two plies can be made. Therefore, using more than one Fourdrinier or combinations of Fourdrinier and gap formers and the different manners in which the formers can and/or need to be placed in order to join the surfaces with more fines is with the levels of ordinary skill in the art in view of Turner et al teaching. Note that Turner et al teach the moving wire moving horizontally in the couching zone, see figures. Turner et al. the use of a Multilayer headbox see figures 2 and 3, respectively described in column 5, lines 35-45 and column 6, lines 39-52.

### **Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure in the art of "Making Multilayered Fibrous Webs."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José A. Fortuna whose telephone number is 571-272-1188. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew J. Daniels can be reached on 571-272-2450. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/José A Fortuna/  
Primary Examiner  
Art Unit 1741

JAF